

REMARKS/ARGUMENTS

The Applicants have carefully considered this application in connection with the Examiner's Action and respectfully request reconsideration of this application in view of the following remarks.

The Applicants originally submitted Claims 1-14 in the application. In previous responses to Examiner's Actions, the Applicants canceled Claim 5 without prejudice or disclaimer and added New Claims 15-21. Currently, the Applicants have not added, canceled nor amended any claims. Accordingly, Claims 1-4 and 6-21 are currently pending in the application.

I. Rejection of Claim 8 under 35 U.S.C. §112

The Examiner has again rejected Claim 8 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicants regard as their invention. More specifically, the Examiner indicates that it is unclear what causes the dipole-dipole forces of Claim 8, and that the specification is silent on what causes the dipole-dipole forces between the first and second surfaces. The Applicants submit that those skilled in the art understand the phenomena of dipole-dipole forces, or so called dipole-dipole interactions, and what causes such. For example, those skilled in the art understand that dipole-dipole forces, also called Keesom interactions or Keesom forces, are the forces that occur between two molecules with permanent dipoles. Given the well-known definition and cause of dipole-dipole forces, the Applicants request the Examiner to withdraw this rejection.

II. Rejection of Claims 1-4, 6, 7, 10-14, 19 and 20 under 35 U.S.C. §102

The Examiner has rejected Claims 1-4, 6, 7, 10-14, 19 and 20 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,340,822 to Brown, *et al.* ("Brown"). Independent Claims 1, 9, 10 and 13, in one fashion or another, currently include the element that attractive forces couple the first surface and second surface together. Brown fails to disclose this element, as Brown fails to teach the element that the attractive forces couple the first and second surfaces together.

The Examiner argues that if the first and second surfaces were formed by a circuit substrate or chip and the nanostructures were formed from a thermally or electrically conductive material then there would be an attractive force and the molecules from the first and second surfaces would have an intermolecular force to the conductive nanostructures. Currently, the Applicants can not agree or disagree with the Examiner on this point. However, nowhere in Brown is there a teaching that any attractive forces that may exist are sufficient to couple the first and second surfaces together. Say, for the sake of argument, that attractive forces do exist in the structure of Brown. Who is to say, however, that the nanostructures of Brown are configured in such a manner, or even that enough nanostructures exist, such that the attractive forces are great enough to couple the first and second surfaces together. Because Brown fails to disclose any attractive forces, and more specifically fails to disclose that attractive forces are sufficient to couple the first and second surfaces together, Brown fails to teach every claimed element.

Therefore, Brown does not disclose each and every element of the claimed invention and as such, is not an anticipating reference. Because Claims 2-4, 6, 7, 11-12, 14, 19 and 20 are dependent upon Claims 1, 9, 10 and 13, Brown also cannot be an anticipating reference for Claims 2-

4, 6, 7, 11-12, 14, 19 and 20. Accordingly, the Applicants respectfully request the Examiner to withdraw the §102 rejection with respect to these Claims.

III. Rejection of Claims 9 and 18 under 35 U.S.C. §103

The Examiner has rejected Claims 9 and 18 under 35 U.S.C. §103(a) as being unpatentable over Brown in view of EPO Patent No. 1320111 to Fuhrmann, *et al.* ("Fur"). Independent Claims 1, 9, 10 and 13, in one fashion or another, currently include the element that attractive forces couple the first surface and second surface together. As established above, Brown fails to teach this element. Brown further fails to suggest this element. Brown fails to suggest this element because Brown fails to disclose any attractive forces, let alone attractive forces sufficient to couple the first and second surfaces together.

Fur fails to correct the deficiencies of Brown. The Examiner is offering Fur for the sole proposition that the nanostructures are interleaved with one another and that the attractive forces are intermolecular forces. Without even addressing the accuracy of the Examiner's offerings, a teaching or suggestion that the nanostructures are interleaved with one another or that the attractive forces are intermolecular forces are far from a teaching or suggestion that attractive forces couple the first surface and second surface together, as is presently claimed. Accordingly, Fur additionally fails to teach or suggest the aforementioned claimed elements.

Thus, Brown individually or in combination with Fur, fails to teach or suggest the invention recited in independent Claims 1, 9, 10 and 13 and their dependent claims, when considered

as a whole. Accordingly, the cited references fail to establish a prima facie case of obviousness with respect to these claims. Claims 9 and 18 are therefore not obvious in view of the cited references.

In view of the foregoing remarks, the cited references do not support the Examiner's rejection of Claims 9 and 18 under 35 U.S.C. §103(a). The Applicants therefore respectfully request the Examiner withdraw the rejection.

IV. Rejection of Claims 15-17 and 21 under 35 U.S.C. §103

The Examiner has rejected Claims 15-17 and 21 under 35 U.S.C. §103(a) as being unpatentable over Brown in view of U.S. Patent Publication No. 2002/0014667 to Shin, *et al.* ("Shin"). Independent Claim 15 includes the element of an intermediate layer having a first plurality of nanostructures disposed on one side thereof and a second plurality of nanostructure disposed on an opposing side thereof, the intermediate layer configured to be positioned between and adhere a first surface to a second surface. As established above, Brown fails to teach or suggest that the nanostructures adhere or couple a first surface to a second surface.

Shin fails to correct the deficiencies of Brown. The Examiner is offering Shin for the sole proposition that an intermediate layer having nanostructures thereon may be used, and further that attractive forces or intermolecular forces adhere the first and second surfaces. Without even addressing the accuracy of the Examiner's offerings, a teaching or suggestion that an intermediate layer having nanostructures thereon may be used, and further that attractive forces or intermolecular forces adhere the first and second surfaces are far from a teaching or suggestion of an intermediate layer having a first plurality of nanostructures disposed on one side thereof and a second plurality of

nanostructure disposed on an opposing side thereof, the intermediate layer configured to be positioned between and adhere a first surface to a second surface, as is presently claimed. Accordingly, Shin additionally fails to teach or suggest the aforementioned claimed elements.

Thus, Brown individually or in combination with Shin, fails to teach or suggest the invention recited in independent Claim 15 and its dependent claims, when considered as a whole. The combination therefore fails to establish a prima facie case of obviousness with respect to these claims. Claims 15-17 and 21 are therefore not obvious in view of the cited references.

In view of the foregoing remarks, the cited references do not support the Examiner's rejection of Claims 15-17 and 21 under 35 U.S.C. §103(a). The Applicants therefore respectfully request the Examiner withdraw the rejection.

V. Conclusion

In view of the foregoing amendment and remarks, the Applicants now see all of the Claims currently pending in this application to be in condition for allowance and therefore earnestly solicit a Notice of Allowance for Claims 1-4 and 6-21.

The Applicants request the Examiner to telephone the undersigned attorney of record at (972) 480-8800 if such would further or expedite the prosecution of the present application. The Commissioner is hereby authorized to charge any fees, credits or overpayments to Deposit Account 08-2395.

Respectfully submitted,

HITT GAINES, PC

/Greg H. Parker/

Greg H. Parker
Registration No. 44,995

Dated: May 31, 2007

P.O. Box 832570
Richardson, Texas 75083
(972) 480-8800